RTIP ID# *(required)* SBD31850

TCWG Consideration Date August 25, 2009

Project Description *(clearly describe project)*
The proposed project would reconstruct the existing I-215/Barton Road interchange consistent with the Circulation Element of the City of Grand Terrace General Plan and would accommodate projected traffic volumes through 2040. The project proposes to realign the freeway on-ramps and off-ramps, as well as realign Barton Road, La Crosse Avenue, Commerce way and Grand Terrace Avenue. It also involves the widening of Barton Road over the freeway. All project modifications are to the highway ramps and secondary cross streets. The proposed project will not alter the I-215 mainline.

Alternative 1 – No Build Alternative
No reconstruction or improvements would be made to the existing I-215/ Barton Road interchange other than those currently planned and routine road maintenance under this alternative.

Alternative 3
This alternative would reconstruct and improve the existing I-215/Barton Road interchange with a new southbound off-ramp, southbound loop on-ramp, northbound loop on-ramp, and northbound off-ramp. Alternative 3 would widen the Barton Road overcrossing from one to three lanes in each direction, allowing for additional turning lanes onto the southbound and northbound loop on-ramps. The existing freeway overcrossing would be replaced with a new six-lane structure.

Alternative 5
Alternative 5 would be constructed as a single-point/bowtie interchange with a new southbound on-ramp, southbound off-ramp, northbound fly-over off-ramp, and northbound on-ramp. Under Alternative 5, Barton Road would be widened to three lanes in each direction. The existing overcrossing would be replaced with a new six-lane structure.

Alternative 6
This alternative would reconstruct and improve the existing I-215/Barton Road interchange with a new southbound loop on-ramp, southbound off-ramp, northbound off-ramp, and northbound hook on-ramp. Under Alternative 6, Barton Road would be widened to three lanes in each direction. The existing overcrossing would be replaced with a new seven-lane structure.

Type of Project *(use Table 1 on instruction sheet)*
Reconfigure existing interchange

County	**Narrative Location/Route & Postmiles I-215 PM 0.0/2.7**
San Bernardino	**Caltrans Projects – EA#** 0J070

Lead Agency: SANBAG

Contact Person	**Phone#**	**Fax#**	**Email**
Khalil Saba	(909) 889-8611	(909) 388-2002	ksaba@sanbag.ca.gov

Hot Spot Pollutant of Concern *(check one or both)* **PM2.5** **PM10**

Federal Action for which Project-Level PM Conformity is Needed *(check appropriate box)*

Categorical Exclusion (NEPA)		**EA or Draft EIS**	**FONSI or Final EIS**	**PS&E or Construction**	**Other**
	X				

Scheduled Date of Federal Action: March 22, 2011

NEPA Delegation – Project Type *(check appropriate box)*

Exempt	**Section 6004 – Categorical Exemption**		**Section 6005 – Non-Categorical Exemption**
		X	

Current Programming Dates *(as appropriate)*

	PE/Environmental	ENG	ROW	CON
Start	Feb 2009	April 2011	June 2011	June 2013
End	Feb 2011	June 2013	May 2013	June 2015

Project Purpose and Need (Summary): *(attach additional sheets as necessary)*
The purpose of the project is to improve operation of, increase capacity of, and reduce congestion at the I-215/Barton Road interchange. The specific objectives are:

- Address the operational deficiencies of traffic congestion, limited capacity, and inefficient traffic operations at the existing I-215/Barton Road interchange
- Better accommodate the vehicle, person, and goods movement capacity of the interchange to more effectively serve local travel demand
- Provide improvements to serve existing demand and forecasted demand for the 2040 design year
- Reduce forecasted traffic delays at the I-215/Barton Road interchange ramps
- Improve access for emergency response vehicles
- Support federal, State, and local regional plans and policies that call for improving I-215 interchanges
- Accommodate the Surface Transportation Assistance Act (STAA) National Network for oversized trucks

The existing I-215 southbound off-ramp at Barton Road is nonstandard; it intersects with a local street (La Crosse Avenue) before reaching Barton Road. The southbound off-ramp at Barton Road is a five-legged intersection with a two-way frontage road adjacent to the southbound on-ramp. Field observations indicate that this intersection confuses some drivers, which leads to wrong-way moves. The existing interchange does not have adequate vehicular capacity, adequate space for standard truck turning movements, a sidewalk on the south side, or bicycle lanes.

The existing left-turn lane on westbound Barton Road at the I-215 southbound on-ramp does not have sufficient storage capacity during the a.m. and p.m. peak hours. This prevents left-turning and through traffic from moving through the interchange. Queue lengths are forecasted to increase substantially in 2040 without interchange improvements.

The seven study area intersections currently operate at acceptable levels of service (LOS) (LOS B and C) during the a.m. and p.m. peak hours. Without improvements, by 2040 all seven study area intersections would operate at an unacceptable LOS (LOS F) during both the a.m. and p.m. peak hours, with the exception of Barton Road/La Cadena Drive during the a.m. peak hour.

Without this project, the operation and efficiency of the I-215/Barton Road interchange would continue to deteriorate over time, resulting in congestion, delays, and consequent decreased LOS at the interchange and adjacent intersections.

Surrounding Land Use/Traffic Generators *(especially effect on diesel traffic)*
Residential developments account for the majority of the land uses within the vicinity of the Barton/I-215 Interchange. Commercial and light industrial developments are located immediately adjacent to the interchange.

Opening Year: Build and No Build LOS, AADT, % and # trucks, truck AADT of proposed facility
2015 – I-215

No Build: ADT = 193,500, Truck ADT = 13,545, LOS = E

Build: ADT = 193,500, Truck ADT = 13,545, LOS = E

RTP Horizon Year / Design Year: Build and No Build LOS, AADT, % and # trucks, truck AADT of proposed facility
2040 – I-215

No Build: ADT = 332,800, Truck ADT = 23,296, LOS = F

Build: ADT = 332,800, Truck ADT = 23,296, LOS = F

Opening Year: If facility is an interchange(s) or intersection(s), Build and No Build cross-street AADT, % and # trucks, truck AADT
2015 – Barton Road

No Build: ADT = 23,990, Truck ADT = 1,679, LOS = B

Build Alt 3: ADT = 23,910, Truck ADT = 1,674, LOS = B

Build Alt 5: ADT = 23,890, Truck ADT = 1,672, LOS = B

Build Alt 6: ADT = 17,970, Truck ADT = 1,258, LOS = C

RTP Horizon Year / Design Year: If facility is an interchange (s) or intersection(s), Build and No Build cross-street AADT, % and # trucks, truck AADT
2040 – Barton Road

No Build: ADT = 44,350, Truck ADT = 3,105, LOS = F

Build Alt 3: ADT = 44,250, Truck ADT = 3,098, LOS = B

Build Alt 5: ADT = 44,250, Truck ADT = 3,098, LOS = C

Build Alt 6: ADT = 34,690, Truck ADT = 2,428, LOS = C

Describe potential traffic redistribution effects of congestion relief *(impact on other facilities)*
See attached analysis

Comments/Explanation/Details *(attach additional sheets as necessary)*
See attached analysis

$PM_{2.5}$/PM_{10} Hot-Spot Analysis

The proposed project is within a nonattainment area for federal $PM_{2.5}$ and PM_{10} standards. Therefore, per 40 CFR, Part 93, analyses are required for conformity purposes. However, the EPA does not require hot-spot analyses, qualitative or quantitative, for projects that are not listed in Section 93.123(b)(1) as an air quality concern. The project does not qualify as a POAQC because of the following reasons:

i) The proposed project is not a new or expanded highway project. The proposed project is an interchange reconstruction project that does not increase the capacity of I-215. This type of project improves freeway interchange operations by reducing traffic congestion and improving merge operations. Based on the *Traffic Operations Analysis* (May 2009), the proposed Build Alternatives would increase the capacity of Barton Road through the interchange. However, the traffic volumes along Barton Road would not exceed the 125,000 average daily trips threshold for a POAQC. In addition, the total truck percentages along Barton Road would not exceed the 8 percent threshold, and the total truck average annual daily traffic (AADT) would not exceed the 10,000-vehicle threshold for POAQC. The future traffic volumes along I-215 and Barton Road are shown in Table 1.

ii) The proposed project does not affect intersections that are at LOS D, E, or F with a significant number of diesel vehicles. Based on the *Traffic Operations Analysis* (May 2009), the proposed Build Alternatives would reduce the delay and improve the LOS at intersections within the project vicinity. The LOS conditions in the project vicinity with and without the proposed Build Alternatives are shown in Tables 2 through 5.

iii) The proposed project does not include the construction of a new bus or rail terminal.

iv) The proposed project does not expand an existing bus or rail terminal.

v) The proposed project is not in or affecting locations, areas, or categories of sites that are identified in the $PM_{2.5}$ and PM_{10} applicable implementation plan or implementation plan submission, as appropriate, as sites of violation or possible violation.

Therefore, the proposed Build Alternatives meet the CAA requirements and 40 CFR 93.116 without any explicit hot-spot analysis. The proposed Build Alternatives would not create a new, or worsen an existing, PM_{10} or $PM_{2.5}$ violation.

Table 1 2040 Average Daily Traffic Volumes (Total AADT/Truck AADT)

Roadway Link	Alt 1 Traffic Volumes	Alt 3 Traffic Volumes	Alt 5 Traffic Volumes	Alt 6 Traffic Volumes
I-215 between Washington and Barton	332,800 (23,296)	332,800 (23,296)	332,800 (23,296)	332,800 (23,296)
I-215 between Barton and Iowa	306,100 (21,427)	306,100 (21,427)	306,100 (21,427)	306,100 (21,427)
Barton Road west of Grand Terrace	25,750 (1,803)	24,300 (1,701)	24,300 (1,701)	24,300 (1,701)
Barton Road between Grand Terrace and I-215	25,850 (1,810)	26,490 (1,854)	26,490 (1,854)	26,490 (1,854)
Barton Road between I-215 and Michigan	44,350 (3,105)	44,250 (3,098)	44,250 (3,098)	34,690 (2,428)
Barton Road between Michigan and Vivienda	39,250 (2,748)	44,250 (3,098)	44,250 (3,098)	34,690 (2,428)

Source: *Traffic Operations Analysis*, May 2009.

Table 2 2040 without Project (Alternative 1) Intersection LOS

Intersection		AM Peak Hour			PM Peak Hour		
		LOS	Delay (sec)	V/C	LOS	Delay (sec)	V/C
1.	Barton Road/La Cadena Drive	C	31.4	0.94	F	169.3	1.51
2.	Barton Road/Grand Terrace Road	F	>500	-	F	>500	-
3.	Barton Road/La Cross Avenue	F	223.4	-	F	>500	-
4.	Barton Road/I-215 SB Ramps	F	184.8	1.40	F	290.6	1.70
5.	Barton Road/I-215 NB Ramps	F	99.7	1.31	F	251.3	1.66
6.	Barton Road/Michigan Street	F	101.7	1.20	F	135.7	1.32
7.	Barton Road/Vivienda Avenue	F	434.9	-	F	>500	-

Source: *Traffic Operations Analysis*, May 2009.

Table 3 2040 Alternative 3 Intersection LOS

	Intersection	AM Peak Hour			PM Peak Hour		
		LOS	Delay (sec)	V/C	LOS	Delay (sec)	V/C
1.	Barton Road/La Cadena Drive	D	35.5	0.97	F	163.7	1.49
2.	Barton Road/Grand Terrace Road	A	6.3	0.60	A	5.5	0.60
3.	Barton Road/La Cross Avenue	Does Not Exist					
4.	Barton Road/I-215 SB Ramps	B	14.6	0.68	B	12.9	0.61
5.	Barton Road/I-215 NB Ramps	A	9.5	0.71	B	13.7	0.83
6.	Barton Road/Michigan Street	Does Not Exist					
7.	Barton Road/Vivienda Avenue	D	45.7	0.91	D	38.8	0.90

Source: *Traffic Operations Analysis*, May 2009.

Table 4 2040 Alternative 5 Intersection LOS

	Intersection	AM Peak Hour			PM Peak Hour		
		LOS	Delay (sec)	V/C	LOS	Delay (sec)	V/C
1.	Barton Road/La Cadena Drive	C	34.5	0.97	F	167.0	1.49
2.	Barton Road/Grand Terrace Road	A	7.6	0.60	A	5.9	0.60
3.	Barton Road/La Cross Avenue	Does Not Exist					
4.	Barton Road/I-215 SB Ramps	C	23.8	0.75	C	31.8	0.87
5.	Barton Road/I-215 NB Ramps	Does Not Exist					
6.	Barton Road/Michigan Street	Does Not Exist					
7.	Barton Road/Vivienda Avenue	D	43.4	0.91	C	32.4	0.90

Source: *Traffic Operations Analysis*, May 2009.

Table 5 2040 Alternative 6 Intersection LOS

	Intersection	AM Peak Hour			PM Peak Hour		
		LOS	Delay (sec)	V/C	LOS	Delay (sec)	V/C
1.	Barton Road/La Cadena Drive	D	38.8	0.96	F	165.9	1.49
2.	Barton Road/Grand Terrace Road	A	7.6	0.61	A	7.2	0.58
3.	Barton Road/La Cross Avenue	Does Not Exist					
4.	Barton Road/I-215 SB Ramps	B	20.0	0.68	B	16.3	0.63
5.	Barton Road/I-215 NB Ramps	C	23.3	0.90	B	19.1	0.83
6.	Barton Road/Michigan Street	Does Not Exist					
7.	Barton Road/Vivienda Avenue	D	50.7	0.93	D	50.0	0.95

Source: *Traffic Operations Analysis*, May 2009.